Notes from the 6/07/05 MI BPM Upgrade Meeting
Stephen Wolbers
These notes can be found in Beams docDB #1526.

Preliminary Discussion

- There was a short discussion of the environment in the Main Injector. There are some locations where it is quite "hot". We also discussed the importance of labelling carefully the cables and connections of the new combiner boards to the BPMs during the upcoming shutdown.

Bob Webber - Combiner box

- Bob showed some slides that showed:

a) Circuit design
b) Frequency response
c) Return Loss

from Manfred Wendt's design of the combiner boxes. These slides can be found in Beams docDB #1865.

- The frequency response shows very little loss at low frequencies with a roll off above 100 MHz. The attenuation is about 1 dB at 53 MHz. Return loss is good across the spectrum. The power is absorbed mostly in the Gaussian low pass filters. The power combiner might be replaced with a different combiner with an external resistor, allowing for even greater beam power.

- Temperature dependence has not yet been checked. The circuit is thought to be rad-hard (all passive components).

- There is one prototype board made already. The plan is to finalize the design and to purchase components as soon as possible for the full order of boards.

- The first test of the board will be made upstairs in MI30. Boards will be put into the tunnel as they are available to test them. This should happen sometime this summer.

Data Acquisition Specification

- There was some discussion of the injection flash, extraction flash, system flexibility, data acquisition specification, etc. It was agreed that a detailed discussion of the data acquisition specification should occur fairly soon so that some of these issues can be discussed and decisions/agreements made. This also involves the organization of the buffers and how to organize them (TCLK, machine state, both?).

- We also discussed the possibility of using LLRF information about the sequence of

events in the MI cycle in the MI BPM system. We agreed to ask Brian Chase to talk to us about what the possibilities might be to get access to that information.